ASSOCIATION OF CANADA LANDS SURVEYORS - BOARD OF EXAMINERS
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SCHEDULE II / ITEM 5
LAND INFORMATION SYSTEMS

February 2000
(1990 Regulations)
This examination consists of **9** questions on **1** page   **(Closed Book)**

Time: 3 hours   **Marks**

1.	A general-purpose database management system (DBMS) is supposed to handle all kinds of data, including spatial data, required in a land information system (LIS) or geographic information system (GIS). If this is the case, why do we still need to develop specialized GIS software to handle spatial data?	10
2.	The relational data model has been the most popular data model for DBMS. Explain, with examples, the relational data model. Also show how a relational database can be used to store the spatial and non-spatial data for a land parcel.	10
3.	With the relational data model in use, why do we have to consider the object-oriented data model?	10
4.	What do we mean by the uncertainty of LIS data? What are the causes for data uncertainty? Why do you think after extensive research on how to model spatial data uncertainty, the availability and use of data regarding uncertainty are still lacking behind?	15
5.	What are the problems we face when integrating LIS data from different sources?	15
6.	Describe the many needs for standardization in the implementation and operation of LIS. What are the solutions available today?	15
7.	Show how topological data can be stored in a database. Why do we need to store additional data on topology in a LIS database since the position of all required features have already been stored?	10
8.	Discuss the implications of datum changes to LIS databases, particularly when a geocode, such as the position of the centroid of a land parcel, has been used to uniquely identify the parcel.	5
9.	What are the human issues, other than the computer issues, that we need to consider in operating a LIS?	10

Total Marks: 100